

Meet the Prof: Leigh Ann Mrotek

by Faculty Advocacy Committee - Wednesday, July 08, 2009

<http://www.uwosh.edu/today/2078/meet-the-prof-leigh-ann-mrotek/>

The following faculty Q&A was submitted by the University of Wisconsin Oshkosh Faculty Advocacy Committee, a committee of the Faculty Senate. Dan Schmidt, professor and chair of the kinesiology department, wrote the introduction.

It is my distinct pleasure and honor to introduce a respected young researcher who is establishing herself on the national level, Dr. Leigh Ann Mrotek. Since her arrival on campus in 2005, Dr. Mrotek has been diligent in her efforts to improve the Kinesiology department at UW Oshkosh. She organized the department's admissions process, added efficiency and structure to kinesiology student advising and led the effort to establish a new major. She currently serves as director of the Kinesiology program.

On a personal level, Leigh Ann seems to have a way of bringing out the best in all of us. She epitomizes the term "team player." As a former college athlete and an avid exerciser, Leigh Ann has credibility with our kinesiology students, many of whom have extensive athletic backgrounds. Her healthy lifestyle, work ethic and professional successes set an excellent example.

How did you find your way to UW Oshkosh?

My husband and I were looking for a smaller town closer to our families. I was lucky to find such a great faculty position in a location that fit our needs.

Why did you choose to go into your field?

During my undergraduate studies, I became intrigued by the ability of people to overcome errors in their movements. At that time, I was a springboard diving coach. On a regular basis, I saw a diver make incredible mistakes during the performance of a dive. The diver would usually be able to make a correction and complete the dive adequately (usually this means "without pain" in diving). Often the diver would not even know that he or she was so close to failure.

The ability of these athletes to make corrections within milliseconds and successfully complete an incredibly complex task is fascinating to me. This led me to begin to watch for corrections during other types of tasks. I found that in every day life, we make mistakes during movements, or the environment changes in a way we would not anticipate many times per day. We can adeptly and quickly respond to these changes.

Later in my studies I found that the computations that our brains must perform to correct movements is tremendous. The fact that we can make these complex computations in milliseconds is extraordinary.

What is your favorite thing about UW Oshkosh?

The people at UW Oshkosh are fantastic. They are really helpful and friendly. The faculty work hard to make the curriculum, the departments and the University better. At a small university like ours, the improvements are quickly noticeable.

What is the professional accomplishment of which you are most proud?

In 2007, I authored a paper published in the Journal of Neuroscience. This journal is highly respected in my field and has a history of publishing innovative experiments. The paper describes our examination and the results of eye-hand coordination and strategies used to intercept targets moving in two dimensions.

What leadership or service activities are you involved in?

I proudly served as the interim director of the UW System Women and Science program. This program works to improve diversity in the STEM fields (science, technology, engineering and mathematics). This includes helping increase diversity in all collegiate levels and in the workforce.

I also served as the University chapter president of Sigma Xi, an honorary research society. Faculty, staff and students from around the University meet to discuss each other's research on a regular basis.

Within the kinesiology department, we are diligently working to create a new kinesiology major. The proposal is at its final level before implementation; the UW System Board of Regents will examine our proposal soon. When passed, the new kinesiology major will provide a rigorous course of study that will prepare students for many career options in the broad kinesiology field.

What is the most common misperception about what you do?

Outside of teaching, I maintain an active research program. This activity requires most of my time when classes are not in session. There are many additional administrative tasks that the faculty must do to run the department. I also contribute to committees at the department, college, University and System levels.

One of the questions that I answer most often is "Do you have to work in the summer?" The answer is "yes." In order to accomplish my goals, I work throughout the summer.

What is the most exciting project you are working on right now?

We are examining how people control grasp while passing an object to (and taking it from) another person. Passing an object to another person is a common task at which we are all Olympians, but performing the task is a feat because it requires precise eye-hand coordination and anticipation. It is also a fundamental natural task that can be measured in the laboratory.

Even so, passing an object to another person has not been studied very much. In our experiments, we have started to discover that the strategies that people use to complete this task are fairly consistent, and the timing of the grasp force between the people is exquisite. If we can better understand the control of this everyday task, we might be able to understand the progression of neural diseases in order to treat them and help people recover function. I am collaborating with Dr. Andrea Mason from UW-Madison and Christopher DeBlois, an undergraduate student in the kinesiology department, on this project.

How does what you research help you to be an effective teacher?

Becoming an expert in an area of study requires focus and dedication. Studying the details of intricate neural mechanisms can be overwhelming. However, being an expert also requires that I organize and summarize the information into a “story” that can be easily understood by others.

My job as a teacher is to present information to students in a clear and cohesive manner. I am confident that I can study information that is complex and present the essential components in a way that most people can understand the concepts. I hope that most of my students can then use the “story” that I present and continue to learn for the rest of their lives.

Describe some ways your department serves northeastern Wisconsin.

My department helps with many health-related endeavors in the community. We have many partners, including the Oshkosh Seniors Center, YMCA, Boys & Girls Club, the local schools, etc. Each year the members of the kinesiology department (in conjunction with our partners) plan the Shamrock Shuffle, a 5K run/walk to raise funds to support local charities.

Some individuals in my department are members of the Tobacco-Free & Drug-Free Communities Coalition of Winnebago County; this group is working hard for Smoke-Free Air and to try to prevent youth from smoking and trying drugs. Members of my department support the programming at the local YMCAs and schools by volunteering their time.

Furthermore, kinesiology student interns provide health and fitness services at local corporations, sports medicine facilities and community organizations. The students in the newly formed Kinesiology Club regularly volunteer to help at community events, including Special Olympics events, the Shamrock Shuffle, YMCA events and other fundraisers. They also bring educational speakers to the UW Oshkosh campus.

My department also supports the broader community by teaching for the PreCollege workshops at UW Oshkosh. These programs bring youth from across the state to UW Oshkosh in order to help them prepare for life at college (academically, socially and personally).

Tell us about your family.

My husband, Mark Gorzek, is a vice president at Menasha Corporation.

What are your hobbies?

I regularly exercise, including running, yoga and strength training. I also enjoy golfing and traveling.

- [Read more faculty profiles.](#)

Faculty, staff and students are encouraged to contribute calendar items, campus announcements and other good news to UW Oshkosh Today at uwot@uwosh.edu.